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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/529,287 | 03/25/2005 | Friedrich Distler | P05,0049 | 2923 |
| 26574 7590 04/19/2007 SCHIFF HARDIN, LLP PATENT DEPARTMENT 6600 SEARS TOWER CHICAGO, IL 60606-6473 | | | EXAMINER KAO, CHIH CHENG G | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2882 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 04/19/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|---------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/529,287 | Applicant(s) DISTLER ET AL. | |
| | Examiner Chih-Cheng Glen Kao | Art Unit 2882 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-17 is/are pending in the application:
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/25/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “gating device ... proximate to said x-ray detector” as recited in claim 15, lines 6-7, must be shown or the feature(s) canceled from the claim(s). Also note that this objection may be obviated by replace “detector” with -- radiator-- in line 7 of claim 15. For purposes of examination, the claim has been treated as such. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because the abstract may not exceed 150 words in length. Also note that the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 13-17 are objected to because of the following informalities, which appear to be minor draft errors including grammatical and/or lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following correction(s) may obviate the objection(s): (claim 13, line 16; replacing "and," with --, and--), (claim 15, lines 4-5, "said radiation detection"; replacing "radiation detection" with --x-ray detector--), and (claim 15, line 20; replacing "and," with --, and--).

Claims 14, 16, and 17 are objected to by virtue of their dependency. For purposes of examination, the claims have been treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seufert (US 2003/0086534) in view of Gunji et al. (US 5237599).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

5. Regarding claims 13 and 15, Seufert discloses an apparatus comprising an x-ray radiator (fig. 1, #3) that emits an x-ray beam (fig. 1, #13), an x-ray detector (fig. 1, #7) disposed in a path of said x-ray beam for detecting x-rays in said x-ray beam (fig. 1, #13), said x-ray radiator and said x-ray detector being rotatable (paragraph 25) around a system axis (fig. 1, #9), and a gating device (fig. 1, #11) disposed in front of and proximate to said x-ray source (fig. 1, #3), said gating device comprising a device housing (fig. 2, #27), first and second absorber elements mounted in said device housing opposite each other (fig. 2, #15 and 35), and an adjustment device (fig. 2, #17-23 and 37-43) connected to said first and second absorber elements for moving said absorber elements relative to each other to set a spacing (fig. 2, region at #13) between said first and second absorber elements forming a slit for passage of an x-ray beam (fig. 1, #13) therethrough, each of said absorber elements having an absorber element edge shaped to give said slit a slit width that varies in a longitudinal direction of the slit (fig. 2, width between #15 and 35), said slit width increasing outwardly (fig. 2, regions outside of #13 and between #15 and 35), from a central position (fig. 2, region at #13), toward respectively opposite ends of said slit, each slit edge, in said longitudinal direction of said slit, having a middle region (fig. 2, region at #13) producing a uniform width of said slit and, further regions respectively disposed

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on opposite sides of said middle region that produce a linearly increasing slit width in said longitudinal direction of said slit (fig. 2, regions outside of #13 and between #15 and 35).

However, Seufert fails to disclose an adjustment device producing a parallelogram-like relative movement between absorber elements.

Gunji et al. teaches an adjustment device producing a parallelogram-like relative movement (fig. 2, via #52-58) between absorber elements (fig. 2, #45 and 46).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the apparatus of Seufert with the adjustment device of Gunji et al., since one would have been motivated to make such a modification for creating more variable positions (figs. 1 and 2) as implied from Gunji et al.

6. Regarding claim 14, Seufert as modified above suggests an apparatus as recited above.

However, Seufert fails to disclose wherein each absorber comprises an absorber element body formed by a flat plate having an absorber element edge.

Gunji et al. teaches wherein each absorber comprises an absorber element body formed by a flat plate having an absorber element edge (fig. 2, #45 and 46).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the apparatus of Seufert with the flat plates of Gunji et al., since one would have been motivated to make such a modification for reducing material costs.

7. Regarding claim 16, Seufert further discloses wherein said x-ray beam exhibits a fan angle β between a central ray of said x-ray beam and an edge ray of said x-ray beam, and

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wherein the respective edges of said first and second absorber elements, in combination, produce a width of said slit that approximately varies dependent on $\cos \beta$ (fig. 2).

8. Regarding claim 17, Seufert further discloses wherein said x-ray beam exhibits a fan angle β between a central ray of said x-ray beam and an edge ray of said x-ray beam, and wherein the respective edges of first and second absorber elements, in combination, produce a width of said slit that approximately varies according to

$$\ell(\beta) = C / \cos \beta + D$$

wherein C and D represent respective constants for said slit (fig. 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Chih-Cheng Glen Kao
Examiner
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